File Code No.

CITY OF SANTA BARBARA

ORDINANCE COMMITTEE AGENDA REPORT

AGENDA DATE: March 24, 2009

TO: Ordinance Committee Members

FROM: Fire Prevention Bureau, Fire Department

SUBJECT: Proposed Amendments To The 2007 Fire Code – RE: Fire Sprinkler Requirements

RECOMMENDATION:

That the Ordinance Committee consider proposed changes to Chapter 8.04 of the Municipal Code specifying new fire sprinkler requirements for both commercial and residential property, and forward the ordinance amendments to the City Council for introduction and adoption.

BACKGROUND:

On December 4, 2007, the City Council adopted Ordinance 5439, which adopted and amended the 2007 California Fire Code. The adoption process included local amendments with findings based on local needs. The California Fire Code and the adopting ordinance both went into effect on January 1, 2008.

At the time of the code adoption, staff at the Fire Prevention Bureau prepared sections amending the Fire Code that would require fire sprinklers in all new residential and commercial construction. The drafted requirements also called for fire sprinklers when certain square footage thresholds were reached in remodels and additions. The new proposed sprinkler sections were removed from the 2007 Fire Code adoption process due to time constraints and the desire to provide a greater opportunity for input from stakeholders. Examples of stakeholders include members of the development community, property owners, architects, general contractors and home builder associations, homeowners and sprinkler contractors.

DISCUSSION:

In November 2008, the proposed fire sprinkler amendments were published in the Land Development Team Bulletin. Staff began to receive comments by phone and email and incorporated some of the suggestions into the first public meeting discussion. The meeting was conducted at the David Gebhard Room on December 4, 2008. During and following that meeting fire prevention staff continued to receive input from stakeholders

that resulted in making adjustments in the proposed code sections. A second Land Development Team bulletin was published in January and a second public meeting was then conducted on January 22, 2009. Additional suggestions were received and the proposal was refined accordingly. On February 26, 2009, staff presented the proposed fire code sections to the Fire and Police Commission at their regularly scheduled meeting. The current proposal requires that automatic fire sprinklers be installed:

1. In all new buildings, residential and commercial, regardless of square footage. This includes all new single family homes. There is an exception for small utility buildings.
2. In any commercial building undergoing an addition.
3. In all commercial structures undergoing a remodel, if the remodel involves 50% or more of the building.
4. In any residential structure where an addition or a remodel exceeds 1000 square feet or 50% of the floor area.
5. In any building undergoing a change of use to a more hazardous use.

Fire sprinklers save lives and property. Residential fire sprinklers are strongly supported by the United States Fire Administration (USFA), a Division of the United States Department of Homeland Security. In a position paper dated March 28, 2008, the USFA called for both smoke detectors and fire sprinklers in residential units. They cited research by the Center for Fire Research at the National Institute of Standards and Technology, indicating that the time available to escape a burning home has decreased dramatically over the past decade. One of the reasons is the increasing volatility of home furnishings, which are often manufactured from synthetic materials. Their research indicates that when a smoke detector is installed in a residence, a reduced fatality rate of 63% is expected. When smoke detectors are used in combination with automatic sprinklers, the risk of dying in a structure fire is reduced by 82%. We have experienced the effectiveness of residential sprinklers in Santa Barbara, with several activations in 2008, one of which saved the life of an unconscious fire victim. On September 22, 2008, the International Code Council adopted the residential sprinkler standard for inclusion into the 2011 Residential Code.

Cost. The National Fire Protection Association conducted a national study and found that the cost of installing sprinklers in single family residences to average $1.61 per square foot. At the request of stakeholders we attempted to determine local costs, due to the higher overall construction costs in this area. Although it was not possible to determine an exact square footage cost, we contacted local sprinkler contractors and learned that the approximate cost for this area is approximately $2.50 to $3.00 per square foot. Residential insurance premium offsets vary, typically between a 5% to 20% reduction in the fire insurance portion of the policy depending on the carrier.

Staff recommends that the Committee consider the ordinance and forward it to the full Council for introduction and adoption. If the Council adopts the ordinance, the new sections would be incorporated into the Fire Code and would be effective as of July 1, 2009.

ATTACHMENT: Summary of Proposed Amendments, 2007 Fire Code

PREPARED BY: Joseph Poiré, Fire Marshal

SUBMITTED BY: Ronald Prince, Fire Chief

APPROVED BY: City Administrator's Office

ATTACHMENT

ORDINANCE COMMITTEE DISCUSSION DRAFT 3/24/09
SHOWING CHANGES FROM EXISTING CODE

ORDINANCE NO. ____

AN ORDINANCE OF THE COUNCIL OF THE CITY OF SANTA BARBARA AMENDING SUBSECTION E OF SECTION 8.04.020 AND SUBSECTIONS C AND D OF SECTION 22.04.020 OF THE SANTA BARBARA MUNICIPAL CODE CONCERNING LOCAL REQUIREMENTS FOR THE INSTALLATION OF AUTOMATIC FIRE SPRINKLERS

THE COUNCIL OF THE CITY OF SANTA BARBARA DOES ORDAIN AS FOLLOWS:

SECTION 1. Findings

1. Climatic Conditions

A. The City of Santa Barbara is located in a semi-arid Mediterranean type climate. It annually experiences extended periods of high temperatures with little or no precipitation. Hot, dry winds, ("Sundowners") which may reach speeds of 60 m.p.h. or greater, are also common to the area. These climatic conditions cause extreme drying of vegetation and common building materials. In addition, the high winds generated often cause road obstructions such as fallen trees. Frequent periods of drought and low humidity add to the fire danger. This predisposes the area to large destructive fires. In addition to directly damaging or destroying buildings, these fires also disrupt utility services throughout the area. The City of Santa Barbara and adjacent front country have a history of such fires, including the 1990 Painted Cave Fire and the 1977 Sycamore Canyon Fire. In 2007, the city was impacted by the Zaca and Gap Fires (240,000 acres and 10,000 acres respectively) and in 2008 the Tea Fire destroyed over 150 homes within the city.

B. The climate alternates between extended periods of drought and brief flooding conditions. Flood conditions may affect the Fire Department's ability to respond to a fire or emergency condition. Floods also disrupt utility services to buildings and facilities within the City.

C. The city's core area continues to become more concentrated, with new multi-storied mixed-use structures whose occupants, along with the structures themselves, could be vulnerable to uncontrolled fires due to

lack of available water. This necessitates the need for additional and on-site fire protection features.

D. These dry climatic conditions and winds contribute to the rapid spread of even small fires originating in high-density housing or vegetation. These fires spread very quickly and create a need for increased levels of fire protection. The added protection of fire sprinkler systems and other fire protection features will supplement normal fire department response by providing immediate protection for the building occupants and by containing and controlling the fire spread to the area of origin. Fire sprinkler systems will also reduce the use of water for firefighting by extinguishing fires at an early stage.

2. Topographical conditions:

A. Natural slopes of 15 percent or greater generally occur throughout the foothills of Santa Barbara, especially in the High Fire Hazard areas such as the Foothill and Extreme Foothill zones. With much of the populated lower elevation areas already built upon, future residential growth is and will continue to occur on steeper slopes and in areas with greater constraints in terrain such as the Foothill and Extreme Foothill zones. Geographic and land-use constraints throughout the city have resulted in greater density along with a large number of mixed use projects, combining residential with commercial occupancies.

B. Traffic and circulation congestion is an ongoing problem throughout the region. Traffic flow in and through Santa Barbara is limited by the transverse Santa Ynez Mountains, which provide limited passage to the north, and the Pacific Ocean to the south. The narrow corridor that Highway 101 occupies is subject to traffic delays under normal conditions and emergency events can render the highway impassable. This has the double effect of preventing traffic from leaving the city and potentially preventing emergency workers, who often live out of town, from entering. This condition existed for several days during the La Conchita slide in 2005 and it disrupted the return of city workers who live in the Ventura area. At various times in the city's history, Highway 101 has also been closed north of the city due to mudslides, fires and flooding, most recently near Gaviota Pass, where a fire also temporarily closed the Rail access.

In addition, roads in the foothills are narrow, often steep and vulnerable to emergency conditions. Some of the older roadways are below current access standards and pose challenges to responding emergency vehicles, especially fire engines. These challenges are exacerbated in the event of an evacuation, particularly in the Foothill and Extreme Foothill zones.

C. These topographical conditions combine to create a situation which places fire department response time to fire occurrences at risk, and makes it necessary to provide automatic on-site fire-extinguishing systems and other protection measures to protect occupants and property.

3. Geological conditions:

The City of Santa Barbara region is a densely populated area that has buildings constructed over and near a vast and complex network of faults that are believed to be capable of producing future earthquakes similar or greater in size than the 1994 Northridge and the 1971 Sylmar earthquakes. Known faults in the city include the Lavigia, North Channel Slope, Mesa and Mission Ridge-More Ranch faults. Additional faults near the city would also be capable of disruption of services, including fire protection. The Southern California Earthquake Center predicts that there is an 80-90% probability of a magnitude 7.0 earthquake somewhere in Southern California before the year 2024. Regional planning for reoccurrence of earthquakes is recommended by the State of California, Department of Conservation.

A. Previous earthquakes have been accompanied by disruption of traffic flow and fires. A severe seismic event has the potential to negatively impact any rescue or fire suppression activities because it is likely to create obstacles similar to those indicated under the high wind section above. With the probability of strong aftershocks there exists a need to provide increased protection for anyone on upper floors of buildings. The October 17, 1989, Loma Prieta earthquake resulted in one major fire in the Marina District (San Francisco). When combined with the 34 other fires locally and over 500 responses, the department was taxed to its fullest capabilities. The Marina fire was difficult to contain because mains supplying water to the district burst during the earthquake. In addition to gas mains, individual gas and electric service connections to residences may provide both fuel and ignition sources during a seismic event. This situation creates the need for both additional fire protection and automatic on-site fire protection for building occupants.

B. Road circulation features located throughout Santa Barbara also make amendments reasonably necessary. There are major roadways, highways and flood control channels that create barriers and slow response times. Hills, particularly in the Foothill and Extreme Foothill zones, slopes, street and storm drain design accompanied by occasional heavy rainfall, cause roadway flooding and landslides and at times may make an emergency access route impassable. Much of Sycamore Canyon lies in an area subject to geologic activity, as witnessed by the recent closure of the road due to the slide potential.

The climatic, topographical, and geological conditions described above make it prudent to rely upon automatic fire sprinkler systems to mitigate extended fire department response times. The automatic sprinkler requirements specified in this ordinance are intended to lessen life safety hazards and keep fires manageable with potentially reduced fire flow (water) requirements for a given structure.

SECTION 2. Subsection E of Section 8.04.020 of the Santa Barbara Municipal Code is deleted in its entirety and readopted to read as follows:

E. **Chapter 9** of the International Fire Code is amended as follows:

1. **Section 903.2 "Where required."** of Section 903 of the International Fire Code is amended to add Section 903.2.18 to read as follows:

903.2.18 City of Santa Barbara Local Requirements. Approved sprinkler systems shall be provided throughout a building in connection with the projects or changes of occupancy listed in this Section 903.2.18 or as specified elsewhere in this Section 903.2, whichever is more protective.

903.2.18.1 New Buildings, Generally. The construction of a new building containing any of the following occupancies: A, B, E, F, H, I, L, M, R, S or U.

Exceptions: A new building containing a Group U occupancy that is constructed in the City's designated High Fire Hazard Area is not required to provide a sprinkler system as long as the building does not exceed 500 square feet of floor area. A new building containing a U occupancy that is constructed outside the City's designated High Fire Hazard Area is not required to provide a sprinkler system as long as the building does not exceed 5000 square feet of floor area.

903.2.18.2 New Buildings in the High Fire Hazard Area. The construction of any new building within the City's designated High Fire Hazard Area.

Exception: A new building containing a Group U occupancy that is constructed in the City's designated High Fire Hazard Area is not required to provide a sprinkler system as long as the building does not exceed 500 square feet of floor area.

903.2.18.3 Additions to Buildings Other than Single Family Residences. The addition of floor area to an existing building that contains any occupancy other than Group R, Division 3.

903.2.18.4 Remodels of Buildings Other than Single Family Residences. The remodel or alteration of the interior of an existing building that contains any occupancy other than Group R, Division 3, where the floor area of the portion of the building that is modified or altered exceeds 25% of the existing floor area of the building. For purposes of this section, all modifications or alterations to an existing building that

occur after the effective date of the ordinance adopting this section shall be counted in the aggregate toward the 25% threshold measured against the floor area of the building as it existed on the effective date of the ordinance adopting this section.

903.2.18.5 Additions to or Remodels of Single Family Residences. The addition of floor area to, or the modification or alteration of the interior of, an existing building that contains a Group R, Division 3 occupancy, where the floor area of the portion of the building that is added, modified, or altered exceeds 1,000 square feet or 50% of the existing floor area of the building. For purposes of this section, all additions, modifications, or alterations to an existing building that occur after the effective date of the ordinance adopting this section shall be counted in the aggregate toward the 1,000 square foot threshold or the 50% threshold measured against the floor area of the building as it existed on the effective date of the ordinance adopting this section.

903.2.18.6 Change of Occupancy to a Higher Hazard Classification. Any change of occupancy in an existing building where the occupancy changes to a higher hazard classification.

903.2.18.7 Computation of Square Footage. For the purposes of this Section 903.2.18, the floor area of buildings shall be computed in accordance with the definition of "Floor area, Gross" provided in Section 1002.1 of the California Building Code.

903.2.18.8 Existing use. Except as provided in this Section 903.2, any building in existence at the time of the effective date of the ordinance adopting this section may continue with such use if such use was legal at the time.

2. **Section 907 "Fire Alarm and Detection Systems"** of the International Fire Code is amended to add Section 907.1.5 to read as follows:

907.1.5 Mixed Use Occupancies. Where residential occupancies are combined with commercial occupancies, a fire alarm system shall be installed which notifies all occupants in the event of a fire. The system shall include automatic smoke detection throughout the commercial and common areas. In addition, a notification system shall be installed in a manner and location approved by the fire code official that indicates the presence of residential dwelling units in accordance with Municipal Code Section 8.04.030 B.

SECTION 3. Subsections C and D of Section 22.04.020 of the Santa Barbara Municipal Code are deleted in their entirety and readopted to read as follows:

C. Section 903.2 "Where Required." of Section 903 is amended to add Section 903.2.18 to read as follows:

903.2.18 City of Santa Barbara Local Requirements. Approved sprinkler systems shall be provided throughout a building in connection with the projects or changes

of occupancy listed in this Section 903.2.18 or as specified elsewhere in this Section 903.2, whichever is more protective.

903.2.18.1 New Buildings, Generally. The construction of a new building containing any of the following occupancies: A, B, E, F, H, I, L, M, R, S or U.

Exceptions: A new building containing a Group U occupancy that is constructed in the City's designated High Fire Hazard Area is not required to provide a sprinkler system as long as the building does not exceed 500 square feet of floor area. A new building containing a U occupancy that is constructed outside the City's designated High Fire Hazard Area is not required to provide a sprinkler system as long as the building does not exceed 5000 square feet of floor area.

903.2.18.2 New Buildings in the High Fire Hazard Area. The construction of any new building within the City's designated High Fire Hazard Area.

Exception: A new building containing a Group U occupancy that is constructed in the City's designated High Fire Hazard Area is not required to provide a sprinkler system as long as the building does not exceed 500 square feet of floor area.

903.2.18.3 Additions to Buildings Other than Single Family Residences. The addition of floor area to an existing building that contains any occupancy other than Group R, Division 3.

903.2.18.4 Remodels of Buildings Other than Single Family Residences. The remodel or alteration of the interior of an existing building that contains any occupancy other than Group R, Division 3, where the floor area of the portion of the building that is modified or altered exceeds 25% of the existing floor area of the building. For purposes of this section, all modifications or alterations to an existing building that occur after the effective date of the ordinance adopting this section shall be counted in the aggregate toward the 25% threshold measured against the floor area of the building as it existed on the effective date of the ordinance adopting this section.

903.2.18.5 Additions to or Remodels of Single Family Residences. The addition of floor area to, or the modification or alteration of the interior of, an existing building that contains a Group R, Division 3 occupancy, where the floor area of the portion of the building that is added, modified, or altered exceeds 1,000 square feet or 50% of the existing floor area of the building. For purposes of this section, all additions, modifications, or alterations to an existing building that occur after the effective date of the ordinance adopting this section shall be counted in the aggregate toward the 1,000 square foot threshold or the 50% threshold measured against the floor area of the building as it existed on the effective date of the ordinance adopting this section.

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D. [Reserved.]